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OBITUARY.

SINCE the publication of the fourth number of the Journal, the Board of Governors of the Institute have lost by death, two of their members, the Rev. JOHN RADCLIFFE, and the Hon. W. B. ESPEUT, M.L.C., F.L.S. The former died at his residence, Galloway Lodge, in the Port Royal Mountains, on the 7th of August, at the advanced age of seventy-seven, and the latter in London on the 23rd of October, aged 9 years.

On the 7th of October, the Board passed the following resolution with reference to Mr. Radcliffe:—

"On motion made and seconded, it was unanimously agreed to record the deep sense entertained by the Board of the great loss sustained by the community as a whole, through the death of one who for the long period of nearly half a century, had in many ways devoted his vigorous and cultivated powers to the public service, and with marked success during the greater part of this time, more especially in promoting the higher education of the youth of the island. They gratefully call to mind and acknowledge the constant and varied services rendered from the beginning to this Board, of which he was one of the original members. And they desire to render to the widow and family of their late colleague the expression of their sincere condolence on the occasion of their painful bereavement."

And on the 4th of November it again became the Board's painful duty to record in the following terms the loss of a colleague —Mr. Espeut—whose death the Secretary reported as having been announced by telegram on the 26th of October:—

"The Board agreed to place on record an expression of their deep regret on account of this intelligence in regard to their late highly esteemed colleague, whose great mental activity, wide and varied information, and skill in the advocacy of any cause he had at heart, marked him out as eminently qualified to fill a large place in the service of the public. Of his work as a member of the Island Legislature it is not their part to speak; but they gratefully remember the important services he rendered, when the working of the Institute was a short while ago under the review of the Legislature, and the high ideal he entertained of the place of this Institute as a means of promoting Literature, Science and Art in this island, and of its claim to liberal public support. The Board desire also to express their deep sympathy with the widow and family of their late colleague."

NEW MEMBERS OF THE BOARD.

ON the 5th of November, His Excellency the Governor appointed Dr. W. H. W. STRACHAN, L.R.C.P., M.R.C.S., a member of the Board of Governors of the Institute, in the room of the late Mr. Radcliffe; and on the 14th of December, he appointed Mr. S. CONSTANTINE BURKE to replace the late Mr. Espeut.

Department of Mines Sydney, Baron Ferdinand von Mueller K.C.M.G. Dr. J. W. Plaxton, Dr. I. W. Anderson, Rev. W.H.F. Bleby, Messrs. J. H. Hart, F.L.S., L. Hutchings, L. B. Wombwell, Wm. Fawcett B.Sc., S. P. Smeeton, J. J. Bowrey F.I.C., F. H. Newman, A. Caldecott M.A., C. W. Eves C.M.G., and Maxwell Hall M.A.

MUSEUM NOTES.

Mammalia.

Bats in Kingston.—A short time ago, Mr. J. Reddington informed me that a house in King Street was very badly infested by bats, so as to cause annoyance to the inhabitants. He has now kindly sent me one of the bats in question, and quite to my surprise, it turns out to be the peculiar and apparently rare species *Mormops blainvillei*, Leach. The Museum previously possessed two specimens, both presented by the Rev. H. Scotland. Gosse never met with this bat, but Mr. Hill gave him one which had been captured at Spanish Town. Dobson, in 1880, recorded it from the environs of Kingston.

Another instance of a supposed rare bat occurring in numbers is afforded by *Nyctinomus macrotis*, Gray. This species was unknown to Gosse, being first recorded from Jamaica by Dobson in 1880, on the strength of specimens in the Museum of the Institute which he examined.

In 1885, on Nov. 13, Mr. William Hall found a specimen in the library of the Institute; but all previous records were eclipsed in August last year, when 36 individuals were found on the same premises.

Fishes.

Aulostoma maculatum, Val.—Some time ago we obtained a specimen of this curious fish (also known as *A. coloratum*) from M. Guy, who stated that it was procured outside Kingston harbour. When fresh, it was brick-red, with the dark spots all black; none brown or blue, as in the spirit specimens described by Dr. Gunther. (Cat. Fish. B.M., iii. p. 537). The red colour disappears very rapidly in spirit, apparently dissolving rather than fading In August, the Museum was indebted to Mr. C. B. Taylor for a second specimen of the same species, larger than the first.

Rhinobatus undulatus, Olfers. Last June I received a letter from Dr. David S. Jordan, asking whether I had actually seen *Rhinobatus undulatus* in Jamaica, as so far as he was aware, the species had never been regarded as from the West Indies, although he had specimens from Bahia. *R. undulatus* was recorded from Jamaica by Bean and Dresel, in their paper on the fishes received from the Institute of Jamaica: but the absence of other records for the W. Indies is curious, since the fish seems to be quite common off this island. I have examined several specimens, including one obtained by Barrous outside the Palisades during the present year. Details concerning some of these specimens were sent to Dr. Jordan, who agrees that the fish is true *R. undulatus*, not *R. horkeli*, as he had at first thought possible.

Mollusca.

The soft parts of snails.— Although so many *shells* have been described from Jamaica, very little indeed is known about the animals inhabiting them The few notes following relate to the soft-parts of four operculate land-shells which I found in October at Mandeville. I am indebted to Mr. Vendryes for assistance in the identification of the species:

Cyclotus jamaicensis, Chem. The animal is a very beautiful object, much more highly coloured than the shell, but it is timid and unwilling to expose itself when under observation. The head, foot and sole are pale pink, and the tentacles bright coral pink.

Trochatella pulchella, Gray. Sides of foot mottled with black. Mouth-parts and tentacles pale, tentacles tinged with yellowish-brown, mouth-parts with pale yellowish. Sole yellowish grey.

Helicina neritella, Lam. A variety with the shell pinkish, without distinct markings. Body and foot translucent greyish-white or pale grey. Tentacles long, blackish. Sole whitish, or translucent white. Neck above suffused with grey, distinctly separated from the white of the sides by a darker grey line or band, extending backwards from the tentacles, and also in front between them.

Helicina adamsiana, Pfr. Variety with the shell lively red-brown. Sole broad, whitish, sides of sole appearing blackish from black of sides of body

showing through. Tentacles blue-black, *with a very peculiar and characteristic quivering motion.* Sides of body and foot whitish, rather heavily mottled with blackish.

Coleoptera.

Staphylinidæ in Jamaica.—This group of beetles appears to be very poorly represented in our island, a search for specimens in Kingston having at present resulted in the discovery of only a single very minute species. This has been identified by Mr. Albert Fauvel as *Trogophlaeus fulvipennis*, Fauv., an addition to the Jamaican fauna. It had previously been found in Cuba, St. Thomas, St. Domingo, and Central America.

An Orchid Weevil. A few months ago, Dr. Henderson brought to the Museum a living weevil, which he had found attacking *Oncidium papilio* in Kingston. It was black with a large red patch on the upper part of each elytron; rostrum very long, somewhat curved, directed downwards. As it could not be identified here, it was sent to the British Museum; and Mr. Gahan writes me (under date Sept. 22) that it is probably a *Centrinus*, and possibly a new species. They had one specimen in the B. Mus., without locality, but with a note that it was found on *Oncidium lanceanum*. It came from the late Andrew Murray's collection of injurious insects.

Hymenoptera.

A parasite of Ceroplastes. Last June Mrs. Swainson found a large flattish *Ceroplastes*, probably a new species, under the bark of a lignum-vitæ tree in Kingston. On June 18th I bred from this a small Chalcidid parasite, which Mr. L. O. Howard has identified as *Comys albicoxa*, Ashmead. This parasite, which is new to Jamaica, was previously known as attacking *Dactylopius citri*. The genus *Comys* should, according to the rules of priority, be called *Eucomys*.

Leaf-cutting Bees.—Rose-trees in and about Kingston sometimes suffer severely from the depredations of certain bees of the genus *Megachile*. These insects cut pieces out of the leaves of the roses, with which they construct their nests, or rather egg-cells. Six species of *Megachile* have been recorded from Jamaica, but it is probably *M. poeyi*, Guér., that attacks the roses. In Antigua the same trouble is experienced. Mr C. A. Barber sent me a bee from that island with the following notes:—"Leaf-cutting Bee. I have hunted for this for months. Destroys my roses, reducing the leaves to shattered fragments. Probably my friend who builds tubes of dead leaves, &c., in keyholes. I found a lot when I went into my house." (*in litt.*, Oct. 5, 1892.) I sent the Antigua bee to Mr. Fox of Philadelphia, who identifies it as a variety of *Megachile poeyi*. It differs from the type in having black legs; Mr. Fox has intermediate specimens from Cuba.

Lepidoptera.

Cystineura dorcas, Fab. Mrs. Swainson has been fortunate in finding the larva of this little butterfly: she wrote on Aug. 8th from Bath:—"To my surprise a little *dorcas* butterfly has just emerged from a chrysalis I had; the larva was very small with ◇ marks of green down the back." In October I noticed *C. dorcas* flying somewhat commonly by the railway track at Balaclava.

Papilio pelaus, Fab. This species, judging from the larva, is closely allied to *P. thoas* and *P. cresphontes*, although the imago has a different appearance. On July 13th, Mr. Cockburn brought me several larvæ from Charlemont Pen, in St. Andrew, feeding on Prickly Yellow. They were mature and about to pupate; from one of them, I made the following description:—

Larva; length about 4 cm., stout, cylindrical, but 1st and 2nd segments smaller: head shiny brown, with a whitish spot on each side of crown anteriorly. Body dark brown; a pair of short sub-dorsal tubercles on each of the four first body-segments, those on the first body-segment ochreous. Side of body with a broad dash of creamy-white, marbled with grey, on 5th to 7th body segments; and some of the same colour on sides of 10th and 11th segments. Abdominal legs pale grey, blotched externally with darker. Thoracic legs brown. On July 27th, a *P. pelaus* emerged from the pupa.

Mr. Panton informs me that in Manchester *P. pelaus* occurs as high as 3000 feet.

The egg of Empyreuma pugione, Linn.—Mr. Bernard Baxter recently brought to the Museum a specimen of this common moth, which had laid some eggs. The egg, which I believe has not been described, is pale lemon yellow, 1⅓ millim. diameter, its outline that of a sphere, with a section cut off to form the flattened base of attachment. The surface appears smooth and rather dull, but examined under the microscope, it is

seen to be finely but very distinctly reticulated, the reticulations being mostly pentagonal. Möschler gives oleander as the food-plant of the larva. *E. lichas*, which was recorded from Jamaica by Gosse, is the same species.

Coccidæ.

Aulacaspis n. g. This generic name is proposed for certain species hitherto referred to *Diaspis*. Typical *Diaspis* may be considered to include such species as *D. cacti*, *D. lanatus*, *D. ostreæformis*, and *D. carueli*, in which the male scale or puparium has only a single keel, or at least, is not distinctly tricarinate. In *Aulacaspis*, which includes *D. rosæ*, *D. boisduvalii*, and *D. bromeliæ*, the male scale is very distinctly tricarinate, and the median lobes of the female are usually serrate, and not distinctly produced. In the species I have examined, the female scale of *Aulacaspis* has a waxy appearance; while in *Diaspis* proper it is often snow-white. *Aulacaspis rosæ*, (Bouch.) was found in Jamaica by Dr. Strachan last August; he kindly sent me specimens on stem of rose-bush from Flamstead. *Aulacaspis boisduvalii* (Sign.) occurs in some abundance on a cocoanut palm in the yard of the Museum; as I was not quite certain about the identification of the species, I sent specimens to Prof. C. V. Riley, who confirms them as *D. boisduvalii*.

Fungi.

A new Cordyceps. On examining the specimen of *Ophionectria cockerellii* found by Mrs. Swainson, I came to the conclusion that unless there were two different species mixed together, which seemed unlikely, the fungus must be a *Codyceps* rather than an *Ophionectria*. I wrote to this effect to Mr. Ellis, sending him part of the specimen, and on Sept. 26th he replied: "The elongated stromata in *Ophionectria* (No. 18) show that it is a *Cordyceps*, and that the specimens first sent were an abnormal condition of the same; but with *only* the specimens first sent, *Ophionectria* was the only genus to receive them, as *Cordyceps* must have the erect stroma. It will have to be *Cordyceps cockerellii*."

Polystictus obstinatus, Cooke. Early in the year I found a large *Polyporus* at Moneague, and sent specimens to Mr. Ellis. Recently, the same fungus was found at Balaclava, in St. Elizabeth. Mr Ellis could not identify it with anything known to him, and so sent an example to Dr. M. C. Cooke for his opinion. Dr. Cooke finds it identical with *Polystictus obstinatus*, which was hitherto known from Australia!

T. D. A. Cockerell.

INSTITUTE OF JAMAICA LECTURES.

IV.—Agriculture.

With the advancement of the various sciences connected with it, Agriculture itself progresses, and it is necessary frequently to review not only the steps forward that have been taken by the earliest of the Arts, but also our own position with reference to it, whether we remain stationary, or are moving on with the rest of the world.

The necessity of the pursuit of Agriculture by the great majority of the people in the island, and the dependence of all upon its progressive development, are subjects of thought that have lately been brought prominently before the public.

The Board of Governors therefore think the present time, when more than usual interest has been roused in the matter, a favourable opportunity to include among the series of periodical Institute of Jamaica Lectures, a short course on Agriculture.

The more profound the knowledge of the principles of agriculture, the more probability there is that good results will be attained in its practice. These elementary principles will be exemplified in the lectures.

Animals and plants depend for their existence upon the soil, and the course will therefore commence with three lectures by Mr. Bowrey upon soil—what it is, and how it can be improved by tillage and manuring, so as to produce the best results.

The animals recently found possess all typical features of the genus; the largest measure 3¼ inches when crawling at full length; the smallest about one inch, this being about the usual length at birth. The number of legs varied greatly, some having 29 pairs while in others as many as 43 pairs were counted! each leg has four pads as in other Neotropical species. In point of beauty the skin certainly surpasses both the New Zealand and Cape species; two distinct types of colouration are to be noticed among these specimens. Some individuals are black on the upper surface including the tentacles and dark brown on the under surface, others are pink or flesh-coloured with a row of rusty-red markings running along the back, and in marked contrast to the rest of the body, the extremities of the antennæ are pure white. At first sight these variations appeared to indicate a sexual difference but on dissection of several specimens of each type all proved to be females and the embryos which they contained resembled both in colour and markings the latter type. Unfortunately, all the seven specimens appear to be females and consequently the sexual characters of the species have yet to be determined.

The preceding account is obviously very fragmentary and many points of doubtful significance have been intentionally omitted, to be further investigated on the arrival of an additional supply of material. The animals are probably more common than is generally supposed as evidenced by the fact that the specimens discovered at Bath agree in character with those described by Gosse near Savanna-la-Mar.

M. GRABHAM.

DESCRIPTIONS OF TWO NEW FUNGI.

BY J. B. ELLIS AND B. M. EVERHART.

Lycoperdon jamaicense, E. & E.

On decaying bark of palm tree, lying on the ground, Lucea, Jamaica, Sept. 1892. (Coll. A. C. Bancroft: com. T. D. A. Cockerell, No. 19.) Gregarious or subcespitose. Peridium obovate, 1-1½ cm. high, ½-1 cm. broad, dark cinereous, about the colour of weather-beaten wood, probably white or nearly so at first, glabrous, narrowed into a short stipe-like base but not plicate below, apex rounded, obtuse and umbonate, but in the few specimens seen, not dehiscent. Peridium thin, but tough and flexible. Sterile base scanty, firm and, like the clavate-cylindrical columella, white. Capillitium faded mouse-colour, the threads 3-5 *u* diam., attached to the inner wall of the peridium and running in towards the columella, sparingly branched and mostly lying parallel. Spores globose, smooth, minute (2-2½ *u*), not pedicellate. The colour of the mature peridium and capillitium is very near clay colour. Seems allied to *L. piriforme*, and, like that species, has a well developed mycelium.

Geaster bancroftii, E. & E.

On rotten wood? Lucea, Jamaica, W.I., Sept. 1892. (Coll. A. C. Bancroft; com. T. D. A. Cockerell, No. 19, partly.)

Small, about 2 cm. diam. when expanded and about 1 cm. when dry. Outer peridium divided about half-way down into about six slender, triangular laciniæ, yellowish white outside and covered with a dark chestnut coloured, inseparable layer inside, subradicate at base. Inner peridium subglobose, about ½ cm. diam., smooth, dark umber colour or about the same colour as the inner surface of the laciniæ; mouth obscurely fimbriate, subconical, without any trace of a circular area, and of the same colour as the contiguous portion of the membrane, or a little darker. Capillitium umber colour, threads about 3 *u* thick. Spores pale umber, globose, smooth, 2½-3 *u* diam.*

*Mr. Bancroft informs me that the exact locality of these fungi was the Phœnix Estate, in the Green Island district.—T.D.A.C.